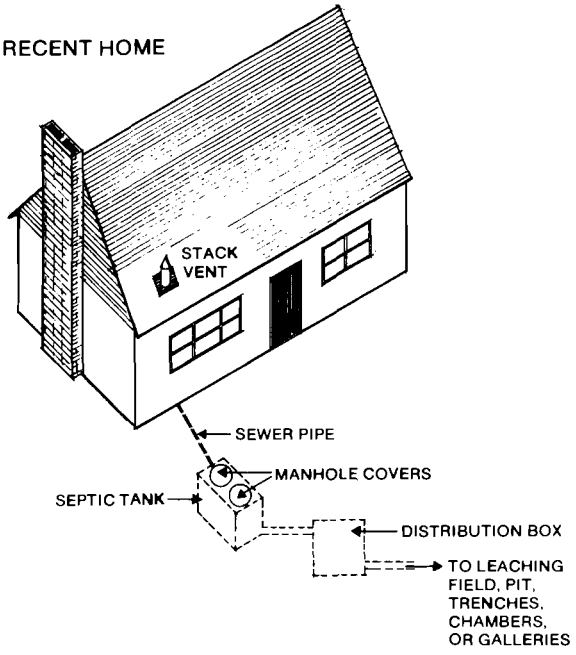
What You Should Know in Order to Identify and Maintain Your Sewage System

DEQE
1 Winter Street
Boston, MA 02108

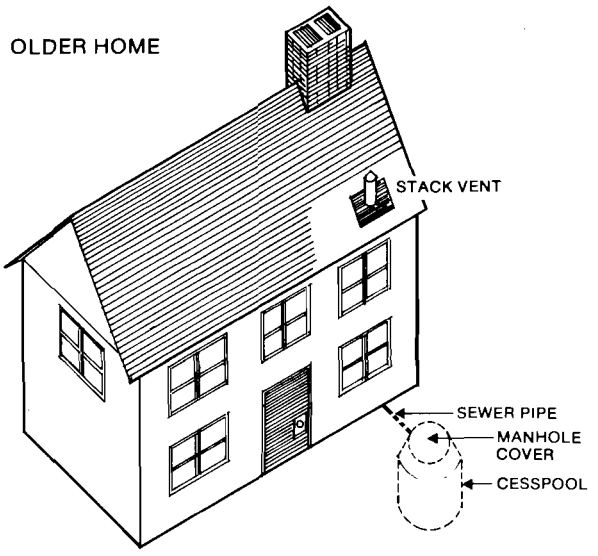
RECENT HOME



Your On-Site Sewage DISPOSAL System can provide trouble free service for many years if maintained properly. This brochure addresses the following topics:

- ON-SITE SEWAGE DISPOSAL SYSTEM INFORMATION
- HOW TO LOCATE YOUR SEPTIC TANK OR CESSPOOL
- INDICATIONS OF A FAILING SYSTEM
- HOW YOU CAN INSPECT YOUR SEPTIC TANK OR CESSPOOL
- SOME REASONS WHY YOUR SYSTEM CAN FAIL
- REASONABLE STEPS TO TAKE TO PREVENT SYSTEM FAILURES
- MAINTENANCE INFORMATION

OLDER HOME



On-Site Sewage Disposal Systems Information

On-site wastewater disposal systems such as septic systems or cesspools provide for the treatment and disposal of household wastewater. Cesspools and septic systems have been known, with PROPER MAINTENANCE, to perform effectively for many years.

Your on-site disposal system is just as important to you as your furnace. A new system of any type or repairs to the old one are very costly. Cost variation is due to the type of failure, soil conditions, water table, and lot size. Proper maintenance is considerably less expensive.

A septic system has two major components: a septic tank and a leaching field. In the septic tank the lighter solids and grease (scum) in the wastewater float at the top and are captured and heavier solids (sludge) settle to the bottom. The effluent from the septic tank is distributed through the leaching field where it is treated by the biological organisms present as it percolates into the soil. In a cesspool the walls of the pit are porous and serve the same function as a leaching field.

Indications of a Failing System

- Mushy soil or standing water above or near the septic tank, cesspool, or leaching field.
- Foul odor from leaching area, nearby streams, etc.
- Any backup of sinks, toilets, or floor drains not caused by blockage of internal pipes within the house.
- Slow flushing toilets.
- Especially tall green grass above or near the leaching area, septic tank, or cesspool.

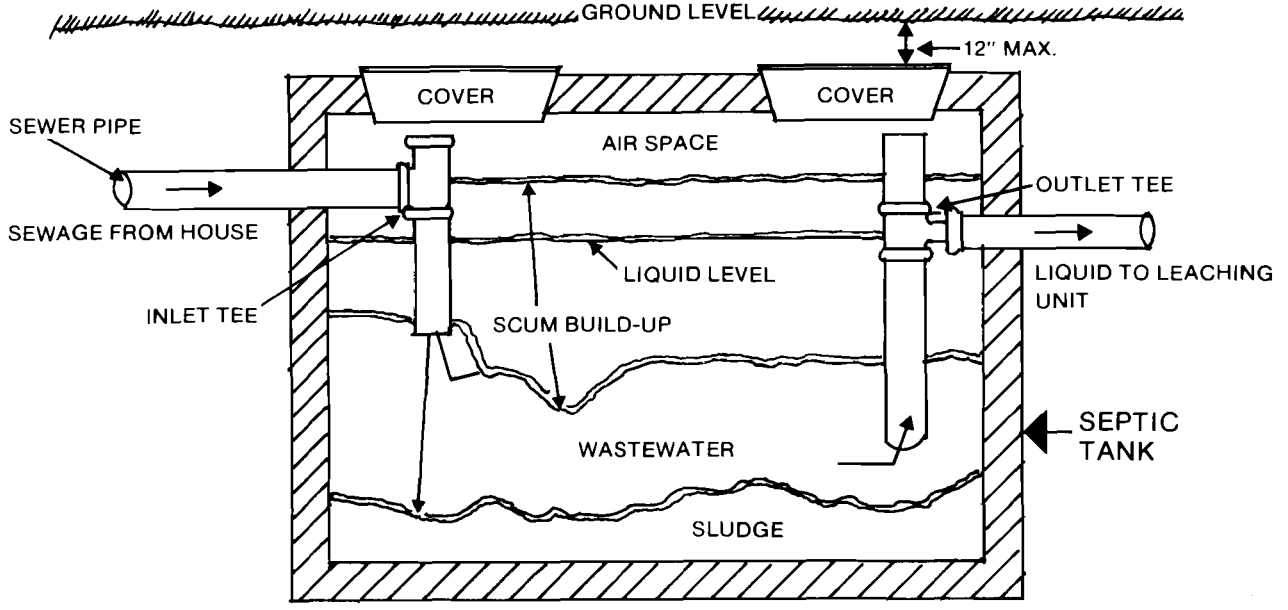
The approximate composition of household sewage is 40% toilet, 15% laundry, 30% bathing, 10% kitchen, and 5% miscellaneous.

How to Locate Your Septic Tank or Cesspool

Yearly inspection of your disposal system yourself can cut costs, providing you follow the correct inspection procedure. If help is needed contact your Board of Health. If you don't know the location of your septic tank:

A. Contact your Board of Health to see if they have a plan on file.
B. If your plan is not on file:
   1. Look for a concrete or metal manhole cover. It is often located in an area of tall green grass, where there is a depression, where the grass does not grow, or where there is rapid melting of snow.
   2. If ground surface inspection is of no help: locate the building sewer (main house drain) in the cellar. Measure 10' from the foundation by following the direction of the pipe (it may be more). Probe the soil with a thin metal rod. The septic tank or cesspool cover should be 12" or less below the surface.
   3. Record the location and give a copy to your local Board of Health.

Cross Section View of a Septic Tank



How You Can Inspect Your Septic Tank or Cesspool

1. Remove cover or covers.
2. With a rod or a stick, measure the scum and sludge layers. If they are more than 1/3 the volume of the septic tank or cesspool, it should be pumped out. Care should be taken to insure that sludge is removed from the bottom.
3. Be sure that both the inlet and outlet tees are in place and free of any solids.
4. For assistance on any cesspool or septic tank problem, call your local board of Health. Their Health Agent is available to help you.

Some Reasons Why Your System Can Fail (and Possible Remedies)

- POOR LOCATION for your leaching area. Soil is not pervious enough, the watertable is high, or there is inadequate percolation of liquids through the soil. (Conserve water.)
- EXCESSIVE SOLIDS and grease in the cesspool, or if there is a septic tank, there could be an overflow of solids into the leaching area. (Pump the tank out more frequently.)
- POOR INSTALLATION: Drain pipes and distribution pipes not properly graded, or septic tank is not level. (Rebuild system.)
- DESIGNED too small for the present loading. (Add additional leaching field area.)
- DRAIN PIPES may become clogged with solids, or roots may grow into the leaching area. (Use root killer, pump tank out more frequently.)
- GREASE CARRYOVER: Some septic tank additives cause grease to be carried over into the leaching field where it can clog the pores. (Do not use septic system additives.)

Reasonable Steps to take to Prevent System Failures

DO NOT use garbage disposals, as they are a leading factor of clogged systems.
DO NOT put solids or sanitary napkins, paper towels, grease, hair, oil (including cooking oil), colored toilet paper, tissues, or coffee grounds down the drain.
INSPECT on-site systems annually. Do not wait until you have a problem.
PUMP OUT your septic tank or cesspool every two to three years.
CONSERVE WATER: Excess water can create problems. Install water saving devices wherever possible.
DO NOT put additives into your system. Medicines, paint, paint thinner, disinfectants, pesticides and acids will only kill the bacteria which are needed to decompose the organic matter.
DO NOT use enzymes or acid for treating your septic tank or cesspool.
DO NOT plant shrubs or trees with deep roots near your leaching area.
DO NOT allow heavy equipment to drive over the leaching area.
AVOID extreme peak flows by spacing out laundry loads, bathing and dishwashing.
DO NOT put chemicals into the cesspool or leach pit for the purpose of maintaining or declogging it. Helpful bacteria in the septic tank are upset by the addition of chemicals.

Maintenance Information

DO NOT USE CESSPOOL CLEANERS. There are no known chemicals, yeasts, bacteria, enzymes or other substances capable of eliminating or reducing the sludge and scum so that periodic cleaning is unnecessary. Many of these cleaners contain highly concentrated organic solvents that are rated toxic and suspected to be cancer-causing by the EPA and National Cancer Institute. They are not bio-degradable and pose a serious potential threat to private and public water supply wells. The use of such products is not necessary for the proper functioning of a septic system.

Annual INSPECTION and periodic pumping is your maintenance program. Immediately investigate signs of failure. The use of chemicals may not be an effective treatment especially if the design, location or installation is the cause of the problem.

This brochure has been reprinted by the Environmental Institute, University of Massachusetts at Amherst under a research contract with the Massachusetts Department of Environmental Quality Engineering, and with the approval of the Old Colony Regional Planning Council. Additional copies may be obtained from DEQE at One Winter Street, Boston, Mass. 02108.